



August 1, 2017

Michelle Kaysen
USEPA Region 5, Mail Code LU-9J
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Second Quarter 2017 Progress Report, Hartford Petroleum Release Site, Hartford, Illinois

Dear Ms. Kaysen,

212 Environmental Consulting, LLC (212 Environmental) is submitting this quarterly report summarizing the progress and status of activities performed at the Hartford Petroleum Release Site (Hartford Site) on behalf of Apex Oil Company, Inc. (Apex) for the time period between April 1, 2017 and June 30, 2017.

1. The following deliverables were submitted by Apex during the second quarter 2017:
 - The *First Quarter 2017 Sentinel Well Monitoring Summary Report* was submitted to the United States Environmental Protection Agency (USEPA) and the Illinois Environmental Protection Agency (Illinois EPA) on April 24, 2017 via standard mail and electronic file sharing.
 - The *First Quarter 2017 Progress Report* was submitted to the USEPA and the Illinois EPA on April 24, 2017 via email.
 - The *Need's Assessment Report, 111 West Cherry Street*, was submitted to the USEPA and Illinois EPA on April 24, 2017 via email. A separate letter prepared for the resident describing the in-home monitoring results and mitigation measures within 111 West Cherry Street was provided to the USEPA and Illinois EPA on April 24, 2017.
 - The *Need's Assessment Report, 113 West Cherry Street*, was submitted to the USEPA and Illinois EPA on May 11, 2017 via email.
 - The *Need's Assessment Report, 610 North Old St. Louis*, was submitted to the USEPA and Illinois EPA on May 11, 2017 via email.
2. The following requests and notifications pertaining to activities at the Hartford Site were submitted by Apex during the second quarter 2017:
 - The USEPA and Illinois EPA were provided an updated summary of the low-flow injection pilot test conducted at 105 West Cherry Street on April 6, 2017.
 - The USEPA and Illinois EPA were provided notification of initiation of river stage triggered monitoring event EBMP-33 and implementation of in-home event based monitoring activities on April 6, 2017.



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- The USEPA and Illinois EPA were provided daily notifications regarding field activities and monitoring results between April 7 and 13, 2017 during river stage triggered monitoring event EBMP-33.
 - The USEPA and Illinois EPA were provided notification of initiation of river stage triggered monitoring event EBMP-34 and implementation of in-home event based monitoring activities on April 30, 2017.
 - The USEPA and Illinois EPA were provided daily notifications regarding field activities and monitoring results between May 1 and 8, 2017 during river stage triggered monitoring event EBMP-34.
 - Apex responded to the USEPA and Illinois EPA request for a summary of dissolved phase MTBE detections beneath the Hartford Site since 2004 and a schedule for collecting supplemental groundwater samples from the sentinel groundwater monitoring network for laboratory analysis. These supplemental samples were proposed as an additional line of evidence demonstrating that MTBE detections within the Village of Hartford Public Water Supply are unrelated to releases attributed to the Hartford Site. This correspondence was submitted to the USEPA and Illinois EPA on May 5, 2017.
 - The USEPA and Illinois EPA were provided notification of initiation of river stage triggered monitoring event EBMP-35 and implementation of in-home event based monitoring activities on May 21, 2017.
 - The USEPA and Illinois EPA were provided a request for modification to the scope of in-home event based monitoring associated with EBMP-35 on May 23, 2017. Approval of the modified work scope was provided by the USEPA on May 23, 2017.
 - The USEPA and Illinois EPA were provided daily notifications regarding field activities and monitoring results between May 23 and 27, 2017 during river stage triggered monitoring event EBMP-35.
 - Apex submitted the analytical results for supplemental groundwater samples collected from the sentinel monitoring network. The analytical results provided an additional line of evidence supporting MTBE detections within the Village of Hartford Public Water Supply are unrelated to releases attributed to the Hartford Site. The results were submitted in an email correspondence to the USEPA and Illinois EPA on May 26, 2017.
 - The USEPA and Illinois EPA were provided a draft project schedule on May 31, 2017 for the installation and connection of nine soil vapor extraction wells, as well as the initiation of structure demolition taking place at the Hartford Petroleum Release Site.
 - The USEPA and Illinois EPA were provided weekly summaries of in-home effectiveness screening results during the second quarter 2017.
3. Apex participated in the following meetings and teleconferences during the second quarter 2017:



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- Teleconference with the USEPA and Illinois EPA to discuss comments to the draft *Semiannual Soil Vapor Extraction System Operations, Maintenance, and Monitoring Report, October 2015 through March 2016* was conducted on April 6, 2017.
 - Meeting with the USEPA and Illinois EPA to discuss the Illinois EPA comments regarding the draft remedial goals, remediation objectives, and performance metrics related to the Multiphase Remedial Framework and draft outline for the dissolved phase component of the Conceptual Site Model was conducted on April 25, 2017.
 - Community focus group meeting with the USEPA, Illinois EPA, and invited stakeholders was convened on April 25, 2017.
4. Apex completed the following in-home effectiveness monitoring activities:
- Weekly in-home effectiveness monitoring was performed within nine structures at the Hartford Site throughout the second quarter 2017.
 - Additional in-home effectiveness monitoring within 105 West Cherry Street, 106 West Birch Street, 107 West Cherry Street, 111 West Cherry Street, 113 West Cherry Street, 119 East Date Street, 122 East Date Street, 126 East Elm Street, 135 East Forest Street, 309 North Olive Avenue, and 409 North Olive Avenue was conducted during the second quarter 2017.
 - In-home effectiveness monitoring was conducted within 39 structures at the Hartford Site in response to river stage triggered monitoring event (EBMP-33) between April 6 and April 13, 2017.
 - Indoor air and sub-slab soil vapor samples were collected within 111 West Cherry Street and 409 North Olive Avenue between April 10 and 11, 2017.
 - A low-flow sub-slab bio-stimulation system was installed within 111 West Cherry Street on April 26, 2017.
 - In-home effectiveness monitoring was conducted within 41 structures at the Hartford Site in response to river stage triggered monitoring event (EBMP-34) between May 1 and May 8, 2017.
 - Indoor air samples were collected within 113 West Cherry Street, 119 West Birch Street, 135 East Forest Street, and 610 North Old St. Louis Avenue between May 3 and 4, 2017.
 - Sub-slab soil vapor samples were collected within 113 West Cherry Street, 135 East Forest Street, and 610 North Old St. Louis Avenue between May 8 and 12, 2017.
 - A low-flow sub-slab bio-stimulation system was installed within 107 West Cherry Street on May 10, 2017.
 - Indoor air and sub-slab soil vapor samples were collected within 122 East Date Street, 126 East Elm Street, and 129 West Birch Street between May 10 and 11, 2017.
 - A ventilation system was installed and operated within 610 North Old St. Louis Avenue beginning on May 12, 2017.
 - An indoor air sample was collected within 111 West Cherry Street on May 12, 2017.



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- An indoor air sample was collected within 610 North Old St. Louis Avenue on May 16, 2017.
 - In-home effectiveness monitoring was conducted within 55 structures at the Hartford Site in response to river stage triggered monitoring event (EBMP-35) between May 22 and 27, 2017.
 - A ventilation system was installed and operated within 111 West Cherry Street and 113 West Cherry Street beginning on June 7, 2017.
5. Apex completed the following dissolved phase investigation activities:
- Quarterly manual fluid level gauging within 378 groundwater monitoring wells and multipurpose monitoring points was completed between April 19 and April 20, 2017.
 - Supplemental groundwater samples were collected and analyzed from the five sentinel monitoring wells and from the Village of Hartford water supply in response to detections of MTBE within the Village of Hartford Water Supply on May 11, 2017.
6. Apex completed the following operations, maintenance, and monitoring (OMM) activities with soil vapor extraction (SVE) system during the second quarter 2017:
- Routine monitoring within vapor collection system components was conducted during the second quarter 2017 including: (1) fluid level gauging; (2) measuring vacuum, air flow, and temperature; and (3) screening total volatile petroleum hydrocarbon and fixed gas concentrations within operating SVE wells.
 - Routine operations within the vapor collection system components was conducted during the second quarter 2017 including adjustments to stingers and valve positions within individual wells, as well as sweeping of the horizontal transmission lines to remove accumulated groundwater.
 - The wellhead completions and controls within four SVE wells (HSVE-023D, HSVE-024S, HSVE-026D, and HSVE-099) were retrofitted during the second quarter 2017. Vapor and water flowrate measurements were routinely collected from the reconfigured wells to validate the revised monitoring methodology.
 - Effectiveness monitoring for the vapor collection system was conducted within 170 nested vapor monitoring probes and multipurpose monitoring points between May 15 and May 19, 2017.
 - Installation of eight soil vapor monitoring probes and completion of pilot borings for the six SVE wells was completed between May 22 and May 26, 2017.
 - Installation and connection of six new SVE wells and connection of three existing SVE wells to the vapor collection system, as well as the abandonment of one SVE well was completed between May 30 and June 23, 2017.
 - Routine OMM of the thermal treatment system components was performed throughout the second quarter 2017 including transport and discharge of accumulated groundwater at the Wood River Wastewater Treatment Plant, cleaning of the above ground and below ground vapor-liquid separators, and sediment removal from the main header line.



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- Non-routine maintenance of the thermal treatment system components was performed during the second quarter 2017 including relocation of an existing system blower from one treatment unit to another and installation of a replacement blower on May 30, 2017.

7. Activities planned during the third quarter 2017 at the Hartford Site:

- Conduct routine and non-routine OMM of the vapor collection and thermal treatment components of the SVE system in accordance with the approved *Vapor Collection System Operation, Maintenance, and Monitoring Plan* (Trihydro 2015) and *HSVE Monitoring and Maintenance Manual* (URS 2014).
- Continue to reconfigure the wellhead and control vaults within select SVE wells, focusing on those wells that contain leaking valves or are situated within SVE Effectiveness Zone 1.
- Conduct quarterly SVE effectiveness monitoring within the nested vapor monitoring probes and multipurpose monitoring points in accordance with the approved *Effectiveness Monitoring Plan* (URS 2014) in May 2017.
- Conduct quarterly in-home effectiveness monitoring in June 2017 in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Continue weekly in-home effectiveness monitoring within nine structures in accordance with the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Conduct river stage triggered monitoring in accordance with the triggers established within the *Final Interim In-Home Effectiveness Monitoring Plan* (Trihydro 2014).
- Continue dissolved phase investigation activities in accordance with the *Final Dissolved Phase Investigation Work Plan* (Trihydro 2013) including: (1) quarterly fluid level gauging, (2) groundwater sampling, and (3) data reduction, analysis, and reporting.
- Conduct semiannual groundwater monitoring of the five sentinel wells located south of the Hartford Site in September 2017.
- Participate in routine teleconferences and meetings with the USEPA and Illinois EPA.

We appreciate your continued engagement with this project. If you have any questions or require any additional information, please contact me at (513) 430-1766.

Sincerely,

Paul Michalski, P.G.

Senior Hydrogeologist

cc: Jordy Federko, Apex Oil Company, Inc.
Tom Miller, Illinois Environmental Protection Agency